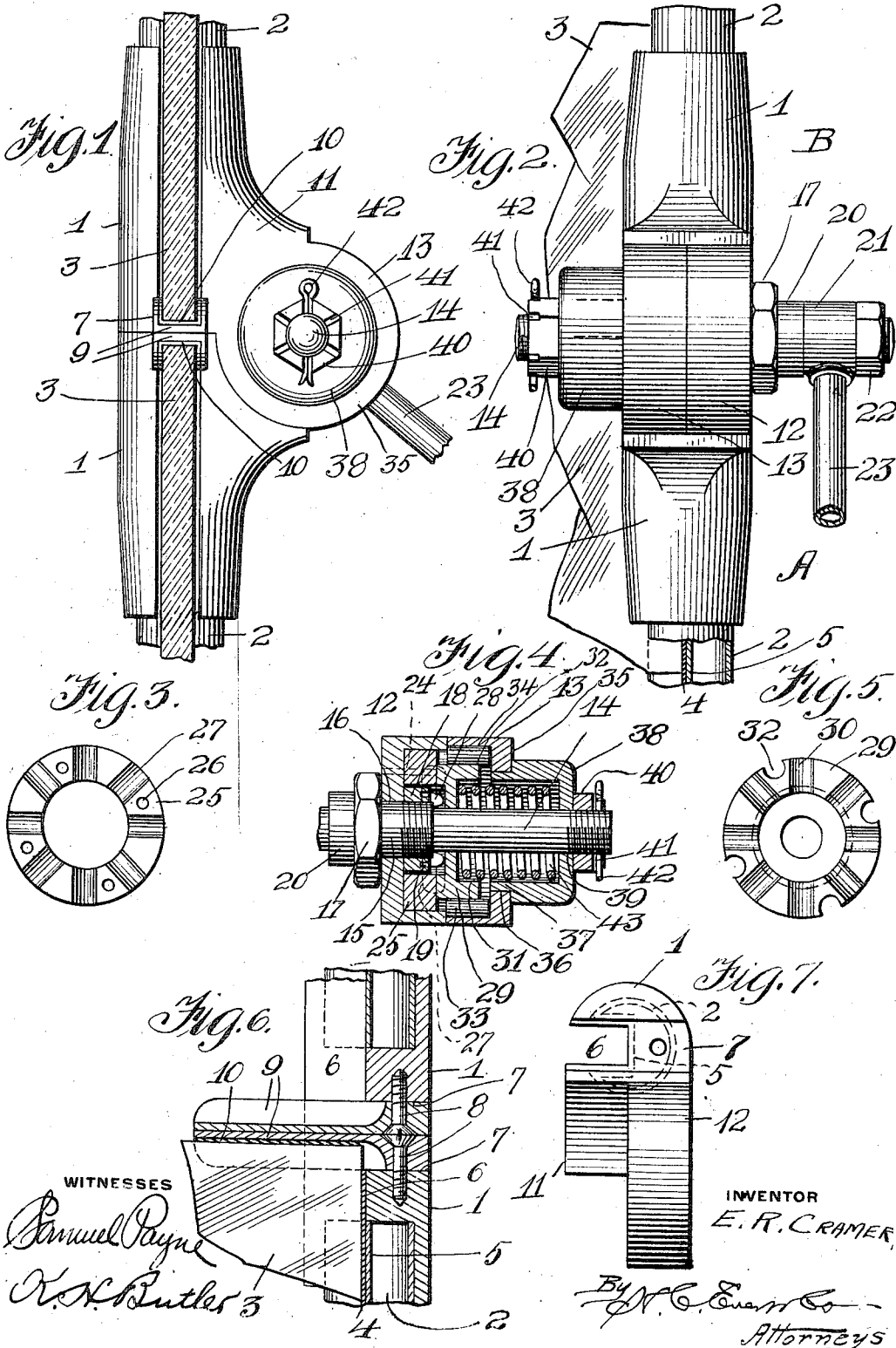


E. R. CRAMER.
WIND SHIELD HINGE.
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985,571.

Patented Feb. 28, 1911.



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WIND-SHIELD HINGE.

985,571.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EDWIN R. CRAMER, a citizen of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Wind-Shield Hinges, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to a wind shield hinge, and the primary object of my invention is to provide a novel hinge that will permit of the upper part of a wind shield being easily and quickly adjusted to a desired position and firmly held during the movement of an automobile.

Another object of this invention is to furnish a wind shield with a hinge that is simple in construction, composed of comparatively few parts, durable and highly efficient for adjustably connecting the parts of the wind shield.

With these and such other objects as may hereinafter appear, the invention consists of the novel construction, combination and arrangement of parts to be hereinafter specifically described and then claimed.

Reference will now be had to the drawing forming a part of this specification, wherein there is illustrated a preferred embodiment of the invention, but it is to be understood that the structural elements thereof can be varied or changed, as to the size, shape and manner of assemblage without departing from the spirit and scope of the invention.

35 In the drawing:—Figure 1 is a side elevation of a hinge constructed in accordance with my invention, Fig. 2 is a front elevation of the same, Fig. 3 is a side elevation of one of the interlocking members of the hinge, Fig. 4 is a longitudinal sectional view of the device, Fig. 5 is a side elevation of another of the interlocking members of the hinge, Fig. 6 is a vertical sectional view of a portion of the hinge, and Fig. 7 is a plan of a stationary member of the hinge.

In the accompanying drawing the reference character A denotes a stationary member and B a movable member, these members being somewhat similar in construction. Each member comprises a tubular body 1 and adapted to fit in each body is a tubular frame 2 adapted to support the vertical edges of a plate of glass 3, the edges of the plate being held by a U-shaped gasket 4 mounted in a longitudinal casing 5, carried

by the frame 2. The inner side of each member is provided with a vertical slot 6 and a transverse slot 7, said transverse slots confronting one another when the members A and B are pivotally connected together. Secured in the slots 7 by screws 8 or other fastening means are channel shaped shelves 9 provided with gaskets 10 adapted to support the confronting edges of the plates of glass held by the members A and B and the frames 2 thereof.

The rear sides of the members A and B at the lower ends thereof are provided with off-set portions 11 and these off-set portions are cut away to provide hinged sockets 12 and 13, the socket 12 being carried by the stationary member A and the socket 13 by the movable member B, these sockets being adapted to confront one another and be held by a bolt 14. The outer end of the bolt 14 is provided with a threaded collar 15 adapted to extend through a central opening 16 provided therefor in the socket 12, and said socket is adapted to be held against a nut 17 by a nut 18 mounted upon the threaded collar 15 within the socket 12, said nut being placed in position by a spanner wrench or other instrument adapted to engage in notches 19 provided therefor in the nut 18. The bolt 14 at the outer side of the nut 17 is provided with a collar 20, a sleeve 21 and a nut 22, said sleeve being connected to an angularly disposed bracing rod 23 adapted to hold the stationary part of the wind shield rigid relatively to the automobile provided with the wind shield.

Secured within the socket 12 by pins 24 is an annular interlocking member 25 having openings 26 to receive the pins 24 which extend into the vertical wall of the socket 12. The outer face of the interlocking member 25 is provided with radially disposed cylindrical pockets 27 for rollers 28 and adapted to yieldably engage the protruding faces of these rollers is a movable interlocking member 29 having the inner face thereof provided with radially disposed recesses 30 adapted to receive the protruding faces of the rollers 28. The outer face of the movable member 29 is provided with a seat 31 and the periphery thereof is provided with pockets 32 for longitudinal pins 33, said pins engaging in recesses 34 provided therefor in the inner face of the socket 13, said pins having the outer ends thereof bearing against the vertical wall 35 of the socket 13, while

the inner ends thereof engage the inner end of the socket 12.

The vertical wall 35 of the socket 13 is provided with a central opening 36 adapted to receive the reduced end 37 of a cup 38, said cup having the closed end thereof provided with a central opening 39 to receive the bolt 14. The cup 38 is retained in engagement with the socket 13 by a nut 40, and the outer face of said nut is provided with radially disposed grooves 41 adapted to receive a cotter pin 42 which extends through the threaded end of the bolt 14. This manner of mounting the cup 38 upon the bolt 14 prevents the cup and the nut 40 from becoming displaced by any movement of the part of these two elements.

Within the cup 38 and encircling the bolt 14 is a coiled spring 43, one end of said spring engaging the closed end of the cup 38, while the opposite end thereof engages the seat 31 of the movable interlocking member 29. The function of this spring is to normally retain the movable interlocking member 29 in engagement with the stationary member 25 and the rollers 28 thereof.

The function of the pins 33 is to prevent the movable interlocking member 29 from rotating relatively to the socket 13, but these pins allowing the interlocking member 29 to shift longitudinally and place the spring 43 under tension, during a shifting movement of the interlocking member 29 with respect to the stationary member 25.

With the member A stationary and holding the interlocking member 25, the member B can be easily adjusted to the angles represented by the pockets 27 and the recesses 30 of the interlocking members, the interlocking member 29 receding during a shiftable movement of the same over the protruding faces of the rollers 28.

What I claim, is:—

1. A hinge of the type described, comprising a stationary member and a movable member, said members having off-set portions provided with confronting sockets, a bolt adapted to extend through said sockets and pivotally connect one of said sockets to the other of said sockets, an interlocking member fixed in one of said sockets, a yieldable interlocking member arranged in the other of said sockets and adapted to confront the first mentioned interlocking member, said interlocking members having the opposing faces thereof provided with radially-disposed recesses and radially disposed rollers mounted in the recesses of one of said members and extending in the recesses of the other of said members and adapted to normally hold one of said members fixed relatively to the other of said members, and longitudinally-extending means for locking the yieldable member in its respective socket to prevent rotative

movement of said yieldable member independent of its socket.

2. A hinge of the type described, comprising a stationary member, a movable member, confronting sockets carried by said members and adapted to be pivotally connected together, an interlocking member fixed in one of said sockets, a spring pressed yieldable member arranged in the other of said sockets, means adapted to hold said interlocking member within said socket, said yieldable member opposing said interlocking member and the opposing faces of said members being provided with radially-disposed recesses, radially disposed rollers mounted in the recesses of one and extending in the recesses of the other of said members, and a plurality of longitudinally-extending elements engaging in said yieldable member and in the wall of its socket to prevent rotative movement of said yieldable member independent of its socket.

3. A hinge of the type described, comprising members having pivoted sockets, an interlocking member fixed in one of said sockets and having one face provided with radially-disposed recesses, radially disposed rollers movably mounted in and projecting from said recesses, a spring pressed interlocking member arranged in the other socket and adapted to confront the first mentioned member, said spring pressed member having the face thereof provided with recesses adapted to receive protruding portions of said rollers, and longitudinally-extending means engaging in the wall of the socket and in said yieldable member to prevent rotative movement of the latter independent of its socket.

4. A hinge of the type described, comprising members having pivoted sockets, an interlocking member fixed in one of said sockets and provided with radially-disposed recesses, radially disposed rollers movably mounted in and projecting from said recesses, a spring pressed interlocking member arranged in the other socket and adapted to confront the first mentioned member, said spring pressed member having one face thereof provided with recesses adapted to receive protruding portions of said rollers, and means within said socket and adapted to cause said spring pressed member to rotate with said socket, said means including longitudinal pins adapted to engage in the inner sides of said sockets and in the periphery of said spring pressed member.

5. A hinge of the type described, comprising members, off-set sockets carried by said members and adapted to be pivotally connected together, an interlocking member fixed within one of said sockets and provided with radially-disposed recesses, radially disposed rollers movably mounted in the recesses and adapted to have portions

thereof protrude from the face of said member, an interlocking member slidably mounted within the other socket and provided with radially-disposed recesses for receiving the protruding portions of said rollers, a cup carried by said socket, and longitudinally-extending rollers arranged within said cup and adapted to normally hold the last mentioned interlocking member in engagement

with said rollers and in a fixed position relatively to the first mentioned interlocking member. 10

In testimony whereof I affix my signature in the presence of two witnesses.

EDWIN R. CRAMER.

Witnesses:

K. H. BUTLER,
EVA A. MILNE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."